

## **A study of pasture raised Polled Hereford`s growth curves<sup>1</sup> [1]**

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### **ABSTRACT**

The objective of the study was to develop a methodology to identify and discriminate early and late maturing animals. Repeated measurements were taken from weaning (185 days) to 14 months (410 days) of age at 45 day-intervals. Weith (W), Hip height (H), and arm circumference (C) were measured and Scores for conformation (CS), Precocity (PS), Muscling (MS) and Frame (FS) were given for 159 bulls and 187 heifers. Spline functions were used to describe the growth curves of bone tissue (BT), muscular tissue (MT) and W, using linear (L) and/or quadratic (Q) segments united at given ages. For bulls, the growth of BT was best described by a Q-L model with a knot at 280 days; for MT, a pure L model; and for W, a L-L at 300 days. For heifers, BT was a pure Q model; for MT a L-Q at 330 days; and for W, a L-Q at 320 days. To obtain and favour early maturing animals, it is suggested to take an extra weight at around 320 days, calculate linear rates of gain from 105 to 320 days and from 320 to 410 days, and then to give greater emphasis for the first period at the expense of the second period of growth.

[1] M. Sc. Dissertation in Animal Science – Agricultural School – Federal University of Rio Grande do Sul, Porto Alegre, (137 p) – March, 1992.